

STUDIES IN THE EUPATORIEAE (ASTERACEAE). CXXXII.

THE GENUS, PHALACRAEA.

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The name Phalacraea has long resided in the synonymy of the genus Piqueria as the latter has been interpreted broadly to include all members of the Eupatorieae without pappus or anther appendage. The present concepts of Piqueria limit the genus to a very distinctive group of species, primarily of Mexico, that have 3-5 phyllaries in a head with an equal number of flowers, papillose anther filaments, and achenes with sparse punctations. The andean genus, Phalacraea proves distinct in all these characters and different from other close relatives in the generally flat receptacle, the lack of non-glandular hairs on the base of the corolla, the numerous setae on the achene, and the rather straight sometimes attenuate base of the achene. The genus also differs from other relatives of Piqueria by the short-acute phyllaries.

Within the genus Phalacraea there is some variation in the shape of the achene base. Three of the species have attenuate bases while P. callitricha has a short broad base. This difference does not detract, however, from the uniformity of the carpodium which is reduced to a narrow basal rim consisting of a few series of small cells. The non-carpodial nature of the slender bases of three of the species is emphasized by the numerous setae on their surface. Such carpodia are very distinct from other segregates of Piqueria and might seem to preclude any close relationship but for the example of somewhat similar structure in Piqueria serrata A. Gray.

Phalacraea A. P. Decandolle, Prodr. 5:105. 1836.

Plants herbaceous, erect from decumbent bases, with few to many branches. Leaves opposite, petioles distinct, slender; blades broadly ovate to triangular, crenate to serrate. Inflorescence laxly alternately branching, broadly cymose. Involucral bracts 10-18 in 2-3 series, subequal, broad with short-acute non-scarious tips, with few to many hairs and glandular punctations on outer surface; receptacle flat to slightly convex. Flowers 10-18 per head; corollas with distinct basal tube and usually expanded abruptly into

a broadly cylindrical limb, tube with many scattered minutely gland-tipped hairs, less hairs on limb, surface of limb with few to many mamilllose cells, lobes slightly longer than wide with inner surface covered by prominent rounded papillae, outer surface smooth with glandular punctations and no hairs; cells rather lax with sinuous walls; filaments with lower part non-papillose, anther collar rather stout, cells mostly subquadrate to shortly oblong with very close prominent annular thickenings, anther tip bilobed usually with two separated minute vestiges of appendage; style with base glabrous, unenlarged; style branches broad, becoming slightly broader up to broadly rounded tips, surface densely covered with high papillae; achene elongate with 4-5 ribs, with numerous setae on sides and base, wall internally with crowded minute punctations, basal trace nearly straight; carpodium a narrow rim with 2-3 rows of small subquadrate cells; pappus completely lacking.

Type species: Phalacraea latifolia A..P.Decandolle

Key to species of Phalacraea

1. Leaves broadly deltoid with mostly subcordate to truncate bases; heads larger, 5-6 mm high; corollas 4-5 mm long, inner surface of corolla limb with very few papillae. . . . P. latifolia
1. Leaves ovate with slightly cuneate bases; heads 4-5 mm high; corollas 2-3 mm long, inner surface of corolla limb densely papillose 2.
 2. Corolla limbs less abruptly expanded at base to ca. 3 times as wide as tube; base of carpodium scarcely narrowed. . . . P. callitricha
 2. Corolla limbs very abruptly expanded and even retrorsely bulging at base, becoming 4-5 times as wide as tube; achene with distinct narrow twisted base 3.
 3. Leaves very bluntly acute; 14-18 broadly elliptical involucrel bracts with broadly acute to obtuse tips. P. pittieri
 3. Leaves mostly short acuminate; usually 10 oblong involucrel bracts, tips of bracts rather sharply acute . . . P. ecuadorensis

The combinations of the four species are as follows.

Phalacraea callitricha (B.L.Robinson) R.M.King & H.Robinson, comb. nov. Piqueria callitricha B.L.Robinson, Proc. Amer. Acad. 42:15. 1906. Colombia.

Phalacraea ecuadorensis R.M.King & H.Robinson, sp. nov.
Plantae procumbentes sensim erectae herbaceae usque ad 80 cm altae paucè ramosae. Caules fulvescentes teretes striati puberuli. Folia opposita, petiolis usque ad 2.5 cm longis; laminae ovatae usque ad 5 cm longae et 3.5 cm latae base late cuneatae trinervatae margine multo serrato-dentatae apice breviter acuminatae supra sparse pilosae et minute puberulae subtus minute puberulae et glandulo-punctatae in nervis sparse pilosae. Inflorescentiae cymosae vel subcymosae, pedicellis 1-15 mm longis glandulis longiuscule stipitatis dense obsitis. Capitula 4-5 mm alta; flores ca. 15-18; squamae involucri 10-12 plerumque 10 eximbricatae ca. 2-seriatae subaequilongae oblongae ca. 2.5 mm longae 0.6-0.8 mm latae bicostatae apice acutae extus glanduliferae superne densius minute piliferae; corollae 2.5-3.0 mm longae, tubis valde distinctis ca. 0.7 mm longis glandulis stipitatis obsitis, limbis ca. 1.5 mm longis abrupte late campanulatis intus papillosis lobis 0.5-0.8 mm longis plerumque aequilateraliter triangularibus vel parum longioribus intus dense papillosis extus sparse glandulo-punctatis; filamenta antherarum in parte superiore ca. 200 μ longa; thecae ca. 600 μ longae; achaenia ca. 2.0 mm longa setifera base breviter distincte stipitata; carpodia superne setifera, cellulis basilariibus quadratis vel breviter oblongis ca. 10 μ latis. Grana pollinis ca. 25 μ diam.

Type: ECUADOR: Azuay: along the road to Naranjal, ca. 14 kms generally W of Cuenca. Elevation ca. 10,000 ft. February 2, 1974, Robert Merrill King 6653 (Holotype US).

The new species is most similar to P. pittieri (R.M.King) R.M.King & H.Robinson but differs by the somewhat acuminate leaf tips and the smaller number of narrower more acute involucrel bracts. The new species is from an area draining eastward into the Amazonian basin. The related P. pittieri is presently known only from areas draining westward or to the north. The Ecuadorian collection of P. pittieri is, nevertheless, close to the locality for P. ecuadorensis and the distributions may prove to overlap.

Phalacraea latifolia A.P.Decandolle, Prodr. 5:106. 1836. Peru.

Phalacraea pittieri (R.M.King) R.M.King & H. Robinson,
comb. nov. Piqueria pittieri R.M.King, SIDA 3:
107. 1967. Colombia, Ecuador.

The species was originally described from Colombia. A second collection seems to represent this species from Ecuador: Chimborazo: southeast of Joyagshi along Sibambe-Tambo R.R., alt. 9,900 ft., Wiggins 10714 (US).

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Phalacræa ecuadorensis R.M.King & H.Robinson,
Holotype, enlargement of heads.